

# Patent Abstracts of Japan

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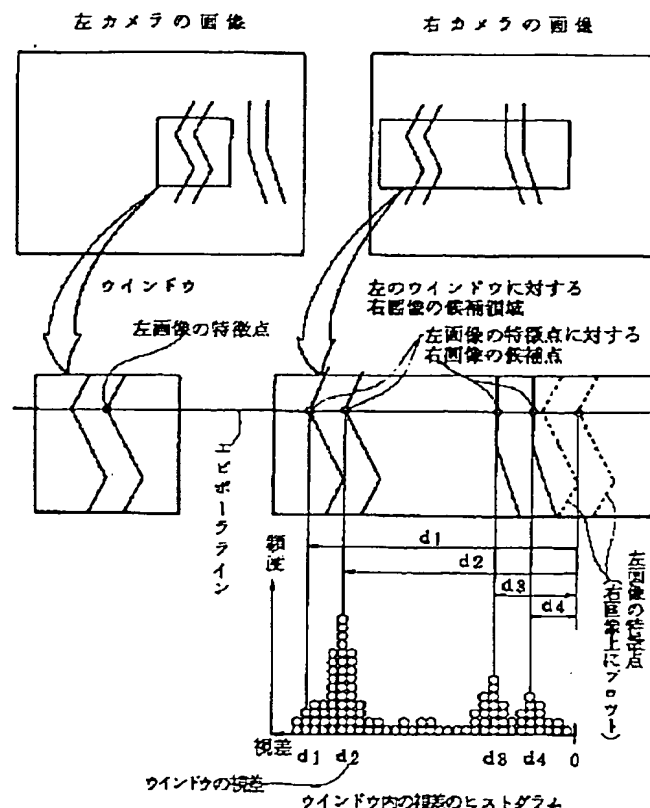
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APPLICANT : TOKYO ELECTRIC POWER CO  
INC:THE;

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TITLE : TREE INTERVAL DISTANCE  
MEASUREMENT SYSTEM



ABSTRACT : PROBLEM TO BE SOLVED: To provide a method which finds the distance between a power transmission line and a tree in a mountain region, where trees grow thickly, speedily at lower cost.

SOLUTION: A pair of stereoscopic photographs obtained by using a patrol helicopter are used to search the right and left screens for feature points by using the principle of both-eye stereoscopy, the parallax between both the screens is found by making the feature points correspond to each other, and the three dimensional coordinates of the feature points are calculated. The power transmission line is regarded as a straight line in a three-dimensional space and represented by the equation of the straight line. The distances between trees and all the feature points that can be made to correspond are calculated by the equation of the straight line. Those distances are arranged in the increasing order and outputted. Almost all of the operations are performed by the calculation with a computer, so the distances of the trees are calculated fast automatically to obtain accurate tree isolation distances.

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